

# Additional airpower

*New refueling ramps increase the U.S. Air Force's capability to maintain and operate aircraft supporting its expeditionary mission in the U.S. Central Command area of operations*

By Andrew Stamer

Two bases in Southwest Asia are better equipped to meet the increased requirements of U.S. Air Force expeditionary forces in the U.S. Central Command area of responsibility with the addition of new refueling ramps.

The 379th and the 380th Air Expeditionary Wings have increased capability to sustain their own missions, as well as servicing other tenant units and transient aircraft.

These ramps were built to handle some of the biggest planes in the U.S. Air Force inventory, such as the KC-10 Extender and the KC-135 Stratotanker, both of which are air-to-air tanker aircraft.

"These projects provide the U.S. Air Force with topnotch facilities for its regional operations," said Col. Larry Sansone, Gulf Regional Engineer. "The ramps expand the Air Force's capability to maintain and operate aircraft that are critical

for supporting the war on terrorism, and they contribute to increased efficiency of Air Force operations in this demanding environment. The construction quality is superb and will support the region for years to come."

This has been a much-needed expansion.

The Transatlantic Programs Center was part of the Air Force team dedicated to making these improvements, by providing



*Courtesy photo*

Refueling ramps have been an essential addition to the Air Force's 379th and 380th Air Expeditionary Wings based in Southwest Asia.

design, contracting, and construction management services, working with the Air Combat Command and U.S. Central Command Air Forces (CENTAF).

In the USCENCOM area of operations, the efforts were led by the Air Force's Construction Management Office, which is a regional joint operation that includes both Air Force and Army Corps of Engineers personnel. Dr. Khaled Masoud serves in a dual capacity as the organization's deputy director and as TAC's Qatar area engineer.

The construction contracts for both refueling ramps were awarded by the Contracting Directorate at TAC.

### 380th AEW

The refueling ramp is essentially a gas station like any found in the United States, except this is on a much larger platform to accommodate aircraft, according to Bill Carter the 380th AEW project manager. Pilots pull the airplanes onto the ramp and refuel on-site. Tanker trucks can even fill up and take fuel to other planes elsewhere if the need arises.

"We used to operate with (tanker) airplanes parked on taxiways that were 40-feet wide, built for fighters," said Lt. Col. Dean Bridger, the 380th Expeditionary Operations Support Squadron's former commander. "Maintainers had to tow the planes in and out of parking and the maintenance stands had to be set up on the sand – which was not an ideal safety situation for maintenance troops servicing the aircraft."

Before these new concrete pads were poured, the wings were fueling on much smaller ramps and using expeditionary methods consisting of running tanker trucks out to the airfield to refuel

the aircraft, said Carter. "This is a permanent fueling facility to meet the Air Force's need."

The pads expanded the available space for aircraft, while the refueling equipment installed on the ramps has increased efficiency of the flight line.

Two 1.2-million gallon fuel systems were placed to meet the Air Force's fueling needs. The new systems replaced the old system of fuel bladders or bags. These bags had to be monitored closely for safety and environmental hazards to ensure they didn't fail, Carter said. The new refueling equipment is much safer.

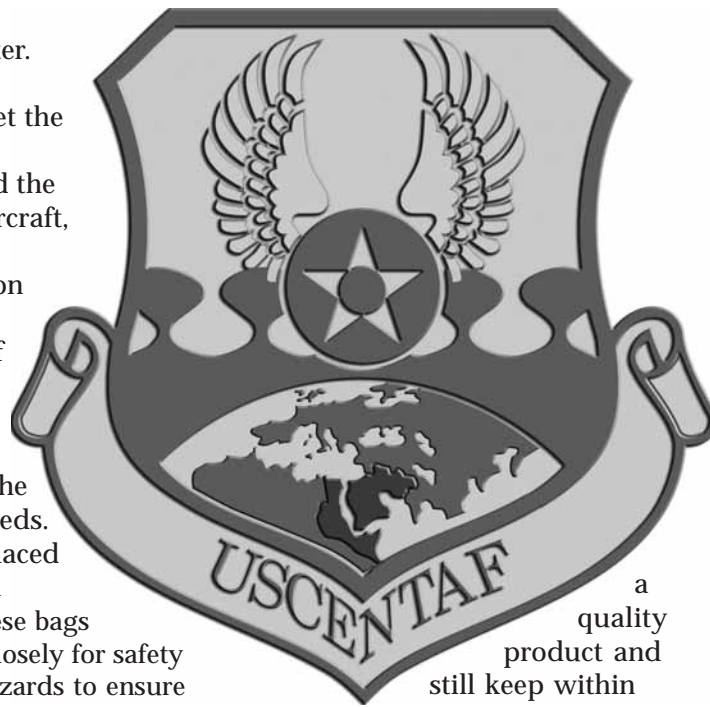
"The new ramp consolidates many of our aircraft in one area, which reduces costly transit time between the locations. It also allows refueling trucks ample room to maneuver and fuel the aircraft," Bridger said.

Use of the ramp has already paid dividends by greatly increasing the unit's operational efficiency, in part because some of the parking areas were located on opposite ends of the airfield at a distance of more than two miles.

"Our squadron was spread out among three ramps," said Lt. Col. Allan Day, the 380th Expeditionary Aircraft Maintenance Squadron's former commander. "We had to do more than 500 tow jobs per month to launch and recover aircraft and do maintenance runs off the parking areas. That took a toll on our people and tow vehicles."

While the 380th AEW began using the parking ramp in October, the whole system wasn't fully operational until April 14, when the refueling portion was completed.

"The key construction and the original schedule desired by the customer were aggressive," said Carter. "Our concern was to deliver



a quality product and still keep within that schedule."

While schedules can be imperative in an expeditionary environment, "the schedule takes a backseat when it comes to quality," he said, because it is about delivering a product that will last for decades and not just a few years, especially at an enduring base.

"The Air Force is now using the system, and from all indications they are extremely happy," said Carter.

In the end, this design/build project was delivered for \$47.4 million by Contrack International, Inc., and after two-and-a-half years of planning, coordination and construction, the 380th AEW is using their 41.5-acre ramp – roughly the size of 32 football fields.

### 379th AEW

A short hop from its sister wing sits the 379th AEW, which had relatively the same work done for it.

In a little more than a year, the 379th AEW added 3.2 million square feet for its ongoing operations.

"This gave the wing 46 additional parking spaces as they rearranged their parking plan and doubled their original design capacity," said Masoud.

A U.S. contractor – CH2M Hill, in joint venture with Dragados and Soluziona – built the refueling and tactical ramps for a cost of approximately \$34 million, while host nation contractors built the strategic ramp.

"We took beneficial occupancy April 29, meaning the host nation completed the construction of the strategic ramp, giving us the connection to the ramp and the taxiway," said Maj. Alan Reilein, an engineer with the Qatar Area Office.

"The host nation is also building more than 20 facilities to be used in coordination with the ramps, which cost \$255 million," said Air Force Capt. Erwin Vargas, Construction Management Office program manager. "These facilities will house

various aircraft support organizations."

These facilities will serve other functions as well.

"They will be able to park the aircraft in this area rather than parking them on the taxiways," Vargas said. "The new facilities will consolidate maintenance operations, enable the host nation to use their ramps and enable our coalition partners to have more room as well."

At one point, a concrete shortage caused by the high volume of construction projects in the region, slowed project progress for several weeks.

"Even with the delay, the project came in on time," said Reilein.

The joint CMO managed the construction, with the 379th Expeditionary Operation Support Squadron and the 379th Expeditionary Civil Engineer Squadron serving as coordinating officials.

## CMO

The CMO was established in January 2003, resulting from a partnership forged between CENTAF civil engineers and the Corps of Engineers to accomplish projects in the Arabian Gulf region.

"The CMO is unique because it is the only office in the Air Force that combines the joint efforts of both of these organizations," said Masoud. The office is led by Air Force Col. Otis Hicks Jr.

The joint effort of the Air Force military staff and Corps civilians brings together the best of both worlds, said Masoud. On the civilian side, the Corps provides the technical and contractual expertise. The military staff provides coordination and is the conduit between the wing and CENTAF as construction affects base operations and end user requirements.



*Courtesy Photo*

Fuel bladders, which had to be monitored for safety and environmental hazards, were replaced by a new fueling system which is more reliable and safer than previous fuel farms.





Courtesy Photo

The Construction Management Office is a joint regional effort between the Air Force and the Army Corps of Engineers to accomplish CENTAF projects in the Arabian Gulf region.

The CENTCOM area of responsibility includes 27 culturally and economically diverse nations located throughout the Horn of Africa, South and Central Asia, and Northern Red Sea regions, as well as the Arabian Peninsula and Iraq. The CMO works at 15 bases in 10 of these CENTCOM countries.

The CMO does not complete every base requirement. Many are left up to the base civil engineers. But this office handles military construction and host nation funded projects.

The CMO's main mission is to provide the right runways and facilities for the Airmen in the region that are crucial to the ongoing global war on terrorism. Such facilities include the refueling, strategic and tactical ramps that the Air Force is now using to support contingency flights.

"There are many advantages to having the customer as part of the execution: mainly, enhanced communications, better quality

products because of the continuous verification of end-product expectations, and more understanding and appreciation of the circumstances and challenges of execution," said Masoud.

Because the Air Force has the lead for this program, the Corps relies on the CMO to communicate with the host nation, Carter said.

"Oftentimes we have to take the plans from a U.S. perspective and adapt them into workable plans in accordance with host nation specifications," said Masoud. "This office helps the host nation and U.S. military implement their sides of an agreement."

The lines of coordination also extend into technical areas. When installing the fuel systems, TAC went to those with expertise.

The Air Combat Command had technical experts, and the Corps' Omaha District is the technical center of expertise for the Corps of Engineers when it comes to fuel system design, said Carter. Both

were included because of aircraft sensitivity to fuel. The experts were tapped to make sure the system functioned properly and was operating correctly, Carter said.

The work done in this part of Southwest Asia is important, but the important lesson, pointed out by the 379th Wing Commander and summed up by Masoud was that "this is not about concrete. This is about a significant power projection milestone for our national security interests in the region."

*Editor's note: Portions of this article were taken from articles by Tech. Sgt. Mike Hammond of the 380th Air Expeditionary Wing Public Affairs Office, Staff Sgt. Celena Wilson and Senior Airman Mark R.W. Orders-Woempner of the 379th Air Expeditionary Wing Public Affairs Office.*